

11. A process for the oxidation of ammonia which comprises reacting ammonia and air in the presence of an oxidation catalyst comprising oxides of (a) at least one element A selected from the group consisting of rare earths and yttrium, and (b) cobalt, said cobalt and element A being in such proportions that the element A to cobalt atomic ratio is in the range 0.8 to 1.2, and at least some of said cobalt and element A oxides are present as a mixed oxide phase with less than 30% of the cobalt (by atoms) being present as free cobalt oxides.

12. A process according to claim 11 wherein less than 25% of the cobalt (by atoms) is present as free cobalt oxides.

13. A process according to claim 11 wherein less than 15% (by atoms) of the cobalt is present as cobalt monoxide.

14. A process according to claim 11 wherein less than 5% by weight of the composition is free cobalto-cobaltic oxide and less than 2% by weight is free cobalt monoxide.

15. A process according to claim 11 wherein part or all of element A is at least one element selected from the group consisting of yttrium, cerium, lanthanum, neodymium, and praseodymium.

16. A process according to claim 15 wherein element A comprises a mixture of at least one variable valency element Vv selected from the group consisting of cerium and praseodymium and at least one non-variable valency element Vn selected from the group consisting of yttrium and a non-variable valency rare earth element.

17. A process according to claim 15 wherein the atomic proportions of variable valency element Vv to non-variable valency element Vn is in the range 0 to 0.3.

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